

Patent Application of

Agustin Carmona

For

TITLE: PORTASMILE TOOTHBRUSH WITH DISPOSABLE BRUSH AND INK  
CARTRIDGE

CROSS- REFERENCE TO RELATED APPLICATIONS Not Applicable.

FEDERALLY SPONSORED RESEARCH Not Applicable

SEQUENCE LISTING OR PROGRAM Not Applicable

BACKGROUND OF THE INVENTION - Field of Invention

This invention relates to toothbrushes, specifically to  
an improved compact and portable toothbrush.

BACKGROUND OF THE INVENTION

Originally, if one out in public or out at a restrain, after a meal wanted to cleanse his or her teeth. one would have to suffice with flossing or utilizing a toothpick, or just simply rinsing ones mouth out with water. due to not having a toothbrush and toothpaste handy. there not usually the items

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PortaSmile Toothbrush With Disposable Brush

And Ink Cartridge...continued

One carries on his or her person there not items of easy portability due to the fixation in this day and age for oral hygiene, my product brings solutions to this fixation, and provides a writing instrument all in one.

Objects and advantages

Accordingly, several objects and advantages of my invention are;

- (A) to provide a portable and compact toothbrush;
- (B) to provide a toothbrush that dispenses its own toothpaste;
- (C) to provide a portable toothbrush that also serves as a pen.

Further object and advantages are to provide a toothbrush that can be used easily and conveniently to cleanse one's teeth. which is simple to use and manufacture. which has a calibration window to dispense an equal amount of toothpaste every time still further objects and advantages will become apparent from a consideration of the ensuing description and drawings.

SUMMARY

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''PortaSmile Toothbrush With Disposable Brush  
And Ink Cartridge'' continued

In accordance with the present invention a portable toothbrush comprises, a toothpaste compartment, a brush, a cap and a ink cartridge.

DRAWINGS

Fig.1 shows a perspective view of both sides.

Fig.2 shows an exploded view.

Fig.2A to 2L shows various front and back views of the parts.

Fig.3,3A show operational illustrations.

Fig.4 shows an instructional view.

Fig.5 shows a view of the invention split down the middle.

DRAWINGS-List of Reference Numerals

10 housing body	16 brush head
10A pump orifice	16A opening
10B male coupling	18 ink pen cartridge
	20 cartridge compartment mount
12 air pump	22 cartridge compartment
	24 brush cap
14 piston	

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DETAILED DESCRIPTION-preferred Embodiment-Figs 1,1A,and2

Fig1 shows a perspective view of the preferred embodiment of the present invention. A housing body 10 has a cavity running through it with a see through calibration window, a pump orifice 10A, and a male couplig10B. the housing body10 also houses a piston14, a hallow brush head16 with an opening 16A inbetween bristles at the base of the brush head 16.A brush cap 24 with respiratory holes at the top of the cap and a clip along side of the brush cap 24. An air pump 12 slides on through the distal end of the housing body 10. the air pumps 12 inner piece as illustrated in (fig 2B) goes over pump orifice 10B. Next, one inserts an ink cartridge 18, its followed by the cartridge compartment 22. the ink cartridge 18 has a body with a spiral groove running the length of the body, at the head it has a gib locking pins.

The cartridge compartment 22 at its widest opening face has an outer border.one then slides on a cartridge compartment mount 20, thread side facing inward. the cartridge compartment mount 20 has an inner border that catches the cartridge compartment s22 outer border. By screwing on the cartridge compartment mount 20 to a male coupling 10B on the housing body 10, it locks the cartridge compartment 22 in place.

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Operation of Invention Figs 3,3A and 4

The manner of using the portaSmile is similar to that of toothbrushes in present use. Namely, one first unscrews the brush head 16 from the housing body 10. Next, one screws on a standard tube of toothpaste as illustrated in (Fig.4). By squeezing tube of toothpaste it fills the housing body's 10 cavity pushing back the piston to the starting position. then, one unscrews toothpaste tube, screws brush head 16 back on. It's now loaded and ready for use. To use, one simply removes brush cap 24. then, one pushes down the air pump 12 continuously as illustrated in (Fig.3A). Which fills housing body's 10 cavity with air that in turn pushes on the piston 14. the piston 14 pushes on toothpaste, which travels the housing body 10 cavity through the hollow brush head 16, coming out through the opening 16A at the base of the brush head 16.

The housing body 10 has a see through window as illustrated in (Fig.1), with calibration marks. so one can always use an equal amount of toothpaste. one then cleanses teeth surface as one would with a conventional toothbrush. when one is done cleansing the surface of the teeth, one simply replaces brush cap. 24. the brush cap 24 has respiratory holes at its top for the airing out and drying of the brush bristles. to use the pen part of the toothbrush one simply turns the cartridge compartment 22 in a clockwise rotation as illustrated in (Fig.3A). which in turn grips the gibs on the head of the ink cartridge 18.

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BY catching the gib it turns along the spiral groove as illustrated in (fig.3a ). once head of the ink cartridge 18 comes out its ready for use. when one is done, one simply turns cartridge compartment 22 in a counter clock wise rotation as illustrated in (fig.3) Until head is in ink compartment 22.

Conclusions, Ramifications, and scope of Invention

Thus the reader will see that the toothbrush of this invention provides a highly reliable, lightweight, compact, yet economical device that can be used by persons of almost any age. and can be clipped and carried in ones pocket, just as one one carry a pen.